



**Course Code** : **MCS-023**  
**Course Title** : **Introduction to Database Management Systems**  
**Assignment Number** : **BCA(3)/023/Assignment/16-17**  
**Maximum Marks** : **100**  
**Weightage** : **25%**  
**Last Dates for Submission** : **15<sup>th</sup> October, 2016 (For July 2016 Session)**  
**15<sup>th</sup> April, 2017 (For January 2017 Session)**  
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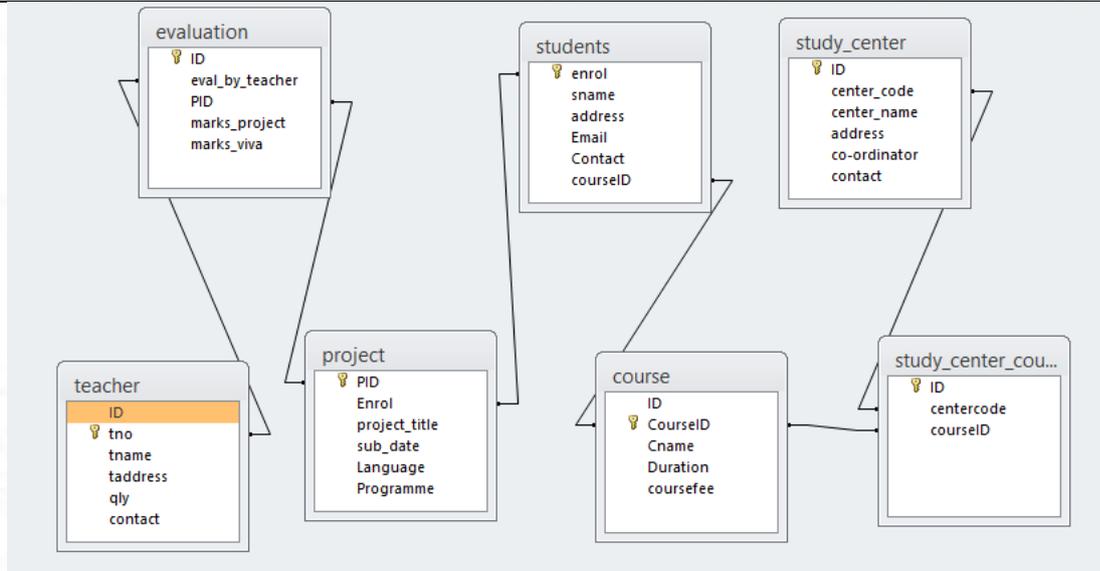
**Question 1. List and describe briefly all the possible applications of a database management system in any IGNOU's Regional Centre?**

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A Database management system is a computerized record-keeping system. It is a repository or a container for collection of computerized data files. The overall purpose of DBMS is to allow the users to define, store, retrieve and update the information contained in the database on demand. Information can be anything that is of significance to an individual or organization.

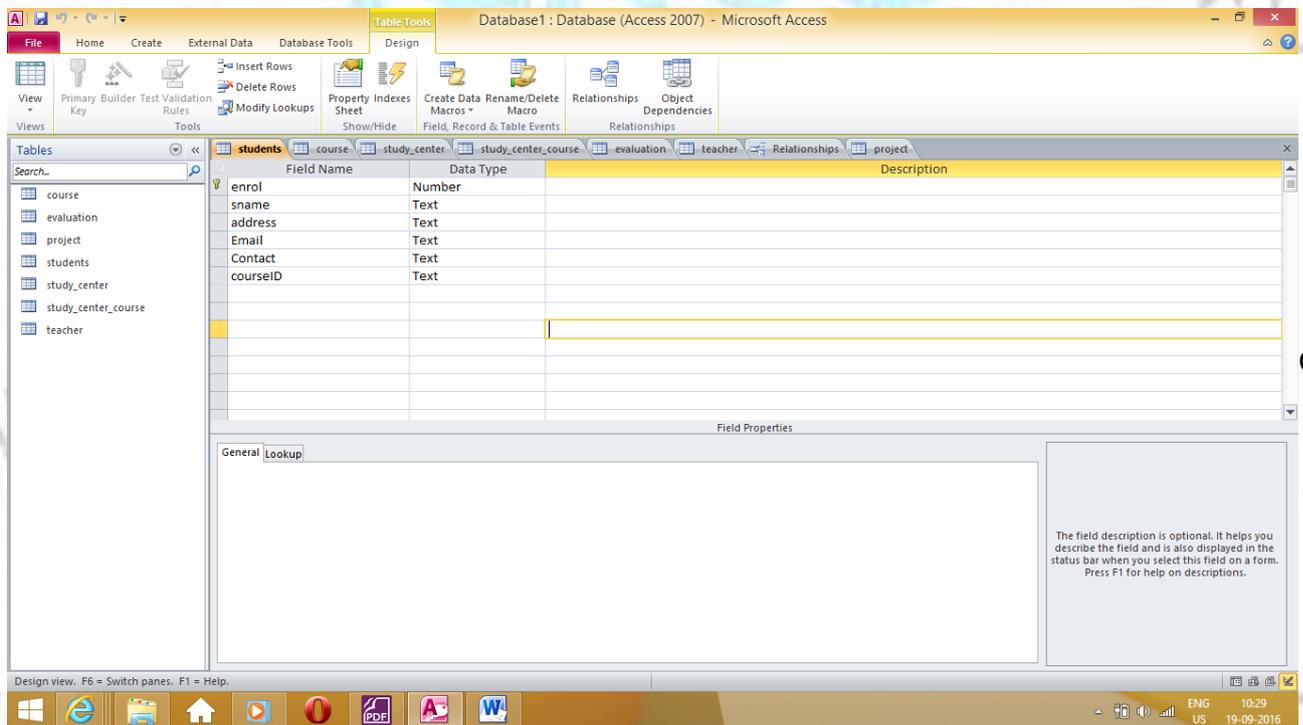
- (i) Database is used to store students' details in a place
- (ii) Easy Query processing and management
- (iii) Easy to understand and user friendly
- (iv) Store Students marks evaluation details
- (v) Store Employee details.
- (vi) Store final year project Submission.
- (vii) Easy to implement Security and integrity of data
- (viii) Fast access of information
- (ix) Data sharing in other department of IGNOU.
- (x) Better data accuracy

**Question : 2. Identify all the associated entities for a Regional Centre Management System, their corresponding attributes, relationships and cardinality and design an Entity-Relationship (ER) diagram for it. [www.ignouassignmentguru.com](http://www.ignouassignmentguru.com)**



Question3. Consider the E-R diagram of Question 2 and design the tables. Perform and show the Normalization till the required normal form. Implement the database using MS-Access and submit the screenshots along with your assignment response for this question.

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The screenshot shows the Microsoft Access Design view for the 'course' table. The table structure is as follows:

Field Name	Data Type	Description
ID	AutoNumber	
CourseID	Text	
Cname	Text	
Duration	Text	
coursefee	Number	

The interface includes a ribbon with 'Design' selected, a 'Tables' pane on the left, and a 'Field Properties' pane at the bottom. The status bar at the bottom indicates 'Design view. F6 = Switch panes. F1 = Help.' and the system tray shows the date and time as 19-09-2016, 10:29.

The screenshot shows the Microsoft Access Design view for the 'study\_center' table. The table structure is as follows:

Field Name	Data Type	Description
ID	AutoNumber	
center_code	Text	
center_name	Text	
address	Text	
co-ordinator	Text	
contact	Text	

The interface includes a ribbon with 'Design' selected, a 'Tables' pane on the left, and a 'Field Properties' pane at the bottom. The status bar at the bottom indicates 'Design view. F6 = Switch panes. F1 = Help.' and the system tray shows the date and time as 19-09-2016, 10:29.



Database1 : Database (Access 2007) - Microsoft Access

Field Name	Data Type	Description
ID	AutoNumber	
centercode	Text	
courseID	Text	

Field Properties

General Lookup

The field description is optional. It helps you describe the field and is also displayed in the status bar when you select this field on a form. Press F1 for help on descriptions.

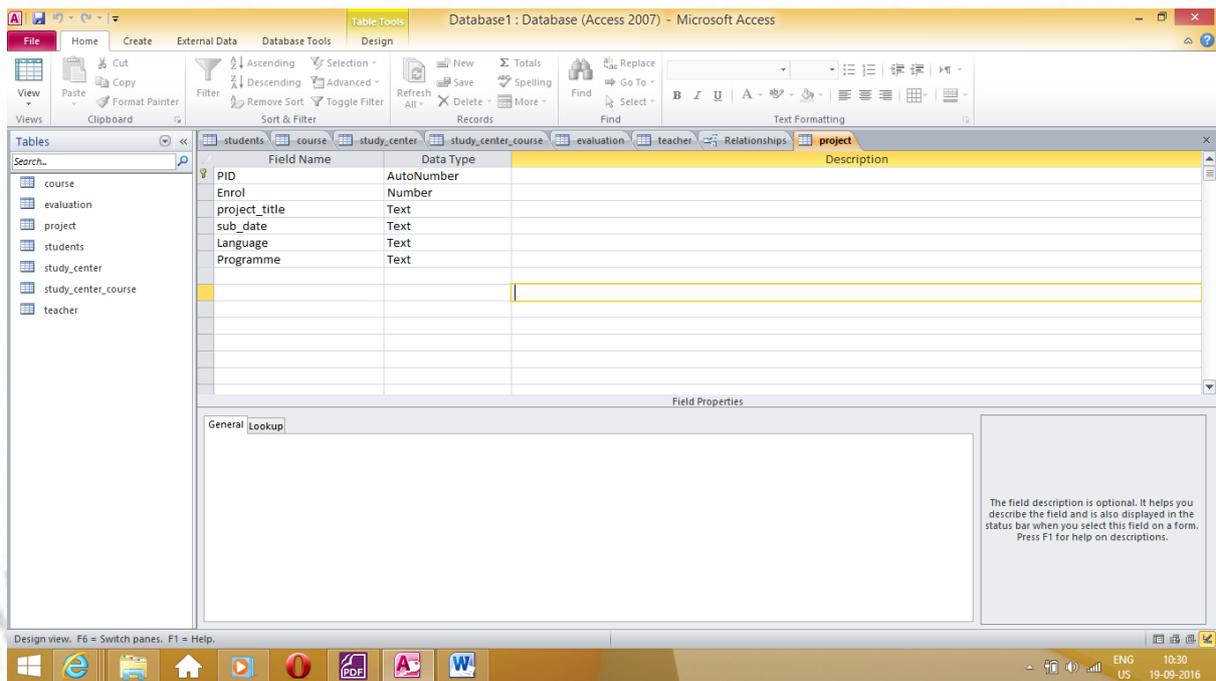
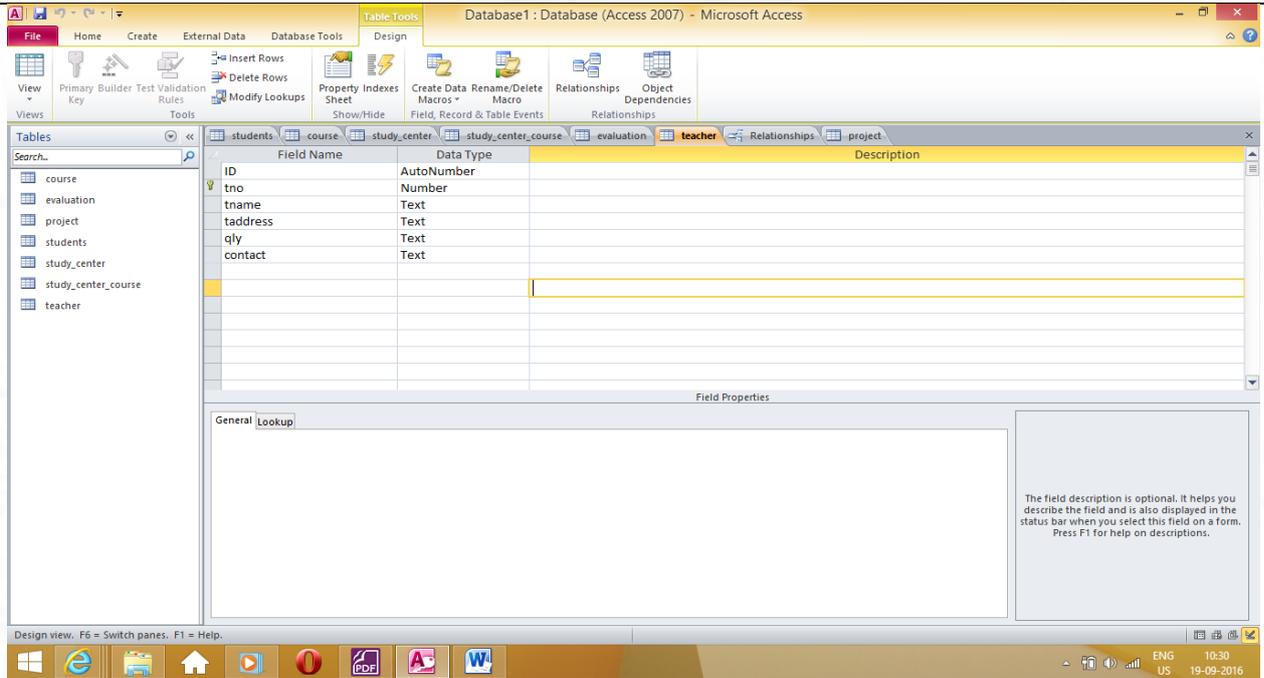
Database1 : Database (Access 2007) - Microsoft Access

Field Name	Data Type	Description
ID	AutoNumber	
eval_by_teacher	Text	
PID	Number	
marks_project	Number	
marks_viva	Number	

Field Properties

General Lookup

The field description is optional. It helps you describe the field and is also displayed in the status bar when you select this field on a form. Press F1 for help on descriptions.



Question 4. Consider a “Library Management System” which has the following tables:

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Find the m\_id and m\_name of the members who have got maximum number of un\_returned books.

- (i) Select m\_id,m\_name from members, from issue\_return where member.mid=issue\_return.mid and issue\_return.actual\_date\_of\_return="";
- (ii) Select \* from book where year\_of\_copyright=2014;



- (iii) Select isbn\_no, book\_title, author1, accession\_no, isbn\_no, m\_id, expected\_date\_of\_return from Book, Book\_Accession, Issue\_return where book.isbn\_no=book\_accession and book\_accession.mid=issue\_return.mid and book.author1="ABC"
- (iv) isbn\_no, book\_title, accession\_no, isbn\_no, date\_of\_purchase from book, Book\_Accession where book.isbn\_no= Book\_Accession.isbn\_no and date\_of\_purchase=2014

question 5. Consider the Relation  $R=\{A, B, C, D, E, F, G, H\}$  and the set of functional dependencies.  $A \rightarrow C$   $B \rightarrow CG$   $AD \rightarrow EH$   $C \rightarrow DF$   $A \rightarrow H$  What is the key for R? Decompose R into 2NF, 3NF and finally in BCNF relation. [www.ignouassignmentguru.com](http://www.ignouassignmentguru.com)

